

SYLLABUS

IDS 478 Regression Analysis

Spring, 2004

Instructor: Professor Rong Chen
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Office Hours: TR 10:45-12:00 or by appointment

Grader: Ms. Chen Chen
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Course Web Site: <http://www.uic.edu/~rongchen/ids478.html>

Prerequisite: IDS 270, IDS 371.
It should be emphasized that this course will cover a great deal of quantitative material at a rapid pace and will require basic computing knowledge. Students who have had difficulty in previous quantitative courses or have difficulty with computers, may find that this course requires a considerable amount of time and effort, and should plan accordingly.

Text: *A Second Course in Statistics - Regression Analysis. fifth edition*, Mendenhall and Sincich. Prentice Hall

Course handout: SAS introduction and examples (can be downloaded from our website)

Note: Not all the topics and chapters in the book will be covered. There will be supplemental materials outside the book.

Lectures: TR 9:30-10:45, BH 208

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| Grading: | Homework & Computing | 30% |
| | Midterm Exam | 35% |
| | Project | 35% |

Tentative Schedule: Project Proposal due: March 4
Midterm: March 16
Project Presentation: April 22, 27 and 29.
Final report due: May 3.
No class on March 11 and 18. Make-up will be scheduled.

Make-up Exams: Make-up of missed midterm exam will be allowed only if I am notified of the University-excused absence **before** the exam. If necessary, a single make-up exam will be given in the last two weeks of the semester. This make-up exam will be comprehensive.

Homework: 1. Homework will be assigned and collected regularly. **Late homework assignment will not be accepted.**
2. All homework assignment must be written on standard 8.5 by 11 paper and stapled together. Computer generated output without detailed explanation and remarks will not receive any credit
3. Homework and Exam solutions will be available on our course web site.

Course outline (tentative):

1. **Review; Introduction to SAS**
2. **Linear Regression Models and Least Squares Estimation:**
Review; Reading SAS output
3. **Model Checking and Residual Analysis:** Review;
4. **Model Building, Variable Selection and Multicollinearity:**
5. **Qualitative Independent Variables; Transformations;**
6. **Logistic Regression:** Qualitative response variable.
7. **Nonlinear Regression:** nonlinear relationship;
8. **Nonparametric Regression:** unknown relationship;